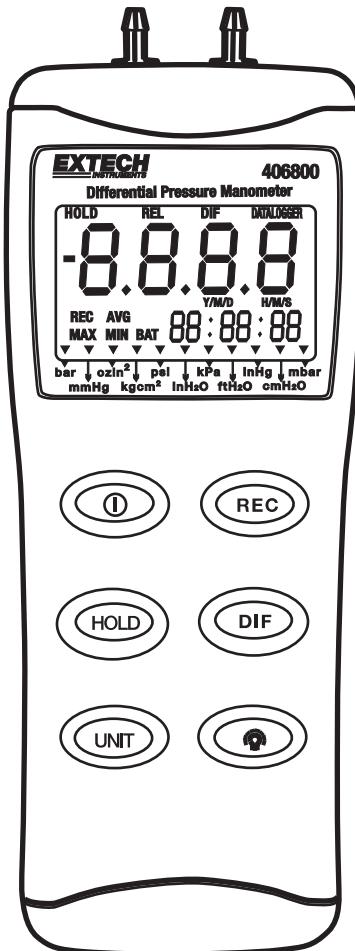




Differential Pressure Manometer

Model 406800



Introduction

Congratulations on your purchase of the Extech 406800 Differential Pressure Manometer. This device measures Gauge/Differential Pressure from 0 to 138.3 inH₂O (inches of water). It features 11 selectable units of measure: inH₂O, psi, bar, mbar, kPa, inHg, mmHg, oz/in², ftH₂O, cmH₂O, kg/cm². Additional features include: Data Hold, Auto Power Off disabled, and an RS-232 for capturing readings to a PC using optional software (407752). Careful use of this meter will provide years of reliable service.

Specifications

Function	Range	Resolution
inH ₂ O	±138.3inH ₂ O	0.1inH ₂ O
psi	±5.000psi	0.001psi
bar	±0.344bar	0.001bar
mbar	±344.7mbar	0.1mbar
kPa	±34.47kPa	0.01kPa
inHg	±10.18inHg	0.01inHg
mmHg	±258.5mmHg	0.1mmHg
ozin ²	±80.00oz/in ²	0.01oz/in ²
ftH ₂ O	±11.53ftH ₂ O	0.01ftH ₂ O
cmH ₂ O	±350.1cmH ₂ O	0.1cmH ₂ O
kgcm ²	±0.351kg/cm ²	0.001kg/cm ²

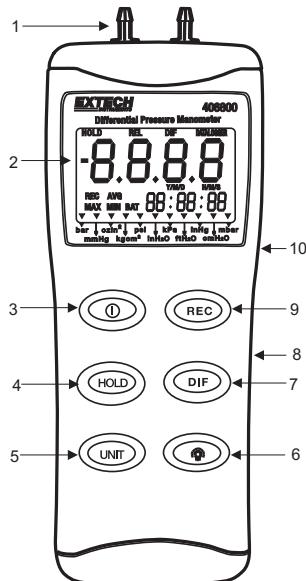
Display	Dual LCD
Accuracy	±0.3%FS
Repeatability	±0.2% to 0.5% FS
Linearity/Hysteresis	±0.3%FS
Combined Accuracy	±1.1%FS (+5 to -4psi) (-4 to -5psi unspecified)
Connectors	Two metal 4.8mm ports for flexible tubing
Maximum Pressure	20psi
Response Time	0.5 seconds typical
Compatibility	Air or Non-Corrosive Gases
Low Battery Indicator	Yes
Overrange Indicator	Err.1
Underrange Indicator	Err.2
Compensated Temperature Range	32 to 122°F (0 to 50°C)
Operating Conditions	32 to 122°F (0 to 50°C); < 80% RH non-condensing
Storage Conditions	-4 to 140°F (-20 to 60°C); <80% RH non-condensing
Power Supply	1 x 9V battery
Dimensions / Weight	7.1 x 2.8 x 1.1" (182 x 72 x 30mm); 7.7 oz. (220g)

Note: Exceeding maximum pressure will cause sensor damage.

Meter Description

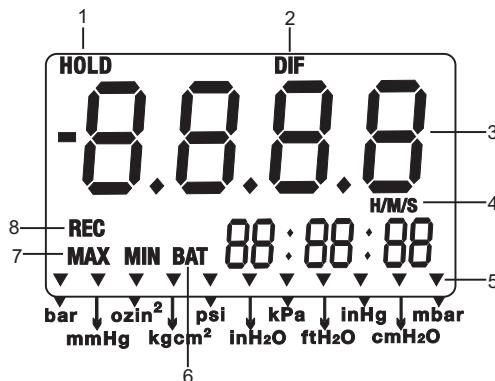
1. 4.8mm input connectors
2. Dual LCD Display
3. On/Off
4. Data Hold and Zero Adjust
5. Unit of Measure
6. Backlight
7. Differential Function and Zero Offset
8. AC adaptor input
9. Min/Max Record
10. RS-232 input

Note: The battery compartment is located on the bottom of the instrument



Display Description

1. Hold Function
2. Differential Mode
3. Primary Data screen
4. Relative Time Clock
5. Pressure Unit indicator
6. Low Battery indicator
7. Max/Min
8. Record Mode



Operation

Power

Press the ON/OFF button to turn power on or off. The meter will perform a short self-test when turned on. The meter defaults to the setting used during the last operation.

Zero Adjust and Offset

Before use and without fittings attached to the meter, press the **HOLD** button for more than 2 seconds to zero the meter. The meter will reset and display “**0 0 0 0**” from right to left. “0.0” will now be displayed.

If it is desired to offset the meter’s display, press the **DIF** button while taking a measurement. Subsequent readings will be the difference between the current measurement and the measurement that was on the display when the **DIF** button was pressed.

Note: If the air pressure on the Positive (+) input is higher than that on the Negative (-) input, the meter will read positive pressure.

Data Hold

Press the HOLD button momentarily to freeze the displayed reading. The '**HOLD**' icon will appear on the upper left-hand side of the display. Press the HOLD button again to return to normal operation.

Record

The MAX/MIN mode allows the user to view only the highest (**MAX**) or lowest (**MIN**) readings with relative time stamp.

1. Press the **REC** button once and “**REC**” appears on the display (All other functions are locked out except for Power & Backlight). The relative time clock also appears in the secondary display and starts counting.
2. Press the **REC** button again and “**MAX**” appears on the display. The display is now showing the maximum pressure and relative time that it was recorded.
3. Press the **REC** button again to display the minimum “**MIN**” reading with the relative time.
4. Press the **REC** button again to continue recording min/max measurements.
5. To exit the MIN/MAX mode, press the **REC** button for 3 seconds to return to normal operation.

Backlight Display

Press the  key to turn on the backlight. It will remain on for 30 seconds.

Automatic Power Off

The meter will automatically shut off after 20 minutes to conserve battery life. To disable Auto Power Off, hold down the **HOLD** button and turn the meter on. An “**n**” will appear in the display indicating that Auto Power Off mode is disabled. The meter will return to normal operation when it is turned off.

Unit

Press the **Unit** button momentarily and the meter will cycle through the 11 available units of measure as indicated by the cursor on the bottom of the display.

RS-232 PC Communications Interface

The meter has a built-in RS-232 serial port for use with the optional PC Interface Data Acquisition Software/Hardware kit (407752).

Error Codes

An error message will appear on the display if the meter fails an internal diagnostic test. **Note:** Error messages E10L and E2UL will not display on the LCD. They will be transmitted to the PC via the RS-232 cable.

1. **Err.1:** Pressure value is over the range.
2. **Err.2:** Pressure is below the range.
3. **Err.3:** DIF function, the differential pressure value is over range.
4. **Err.4:** Zero function; disconnect tubing or repair/replacement necessary.
5. **E10L:** RS-232 error, Pressure value is over the range.
6. **E2UL:** RS-232 error, Pressure is below the range.

Maintenance

Cleaning and storage

1. The meter should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.
2. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart earlier in this manual).

Battery Replacement

When the battery power falls low, “**BAT**” will appear on the LCD. Replace the 9V battery by removing the Phillips screw on the battery compartment door and accessing the battery compartment. Ensure that the compartment cover is securely fastened when finished.

Warranty

FLIR Systems, Inc. warrants this Extech Instruments brand device to be free of defects in parts and workmanship for **one year** from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department for authorization. Visit the website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. FLIR Systems, Inc. specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. FLIR's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

Calibration, Repair, and Customer Care Services

FLIR Systems, Inc. offers repair and calibration services for the Extech Instruments products we sell. NIST certification for most products is also provided. Call the Customer Service Department for information on calibration services available for this product. Annual calibrations should be performed to verify meter performance and accuracy. Technical support and general customer service is also provided, refer to the contact information provided below.

Support Lines: U.S. (877) 439-8324; International: +1 (603) 324-7800

Technical Support: Option 3; E-mail: support@extech.com

Repair & Returns: Option 4; E-mail: repair@extech.com

Product specifications are subject to change without notice

Please visit our website for the most up-to-date information

www.extech.com

FLIR Commercial Systems, Inc., 9 Townsend West, Nashua, NH 03063 USA

ISO 9001 Certified

Copyright © 2014 FLIR Systems, Inc.

All rights reserved including the right of reproduction in whole or in part in any form

www.extech.com

Garantie

FLIR Systems, Inc. garantit que cet appareil Extech Instruments est exempt de défauts matériau et de fabrication pendant un an à partir de la date d'envoi (une garantie limitée de six mois s'applique aux capteurs et aux câbles). Si le renvoi de l'appareil pour réparation devient nécessaire durant ou après la période de garantie, contactez le service client pour autorisation. Pour obtenir les coordonnées, visitez le site Web suivant : www.extech.com. Un numéro d'autorisation de retour (AR) doit être délivré avant tout retour de produit. L'expéditeur prend à sa charge les frais d'expédition, le fret, l'assurance et l'emballage correct de l'appareil afin de prévenir toute détérioration durant le transport. Cette garantie ne s'applique pas aux dommages imputables à l'utilisateur, tels que l'usage impropre ou abusif, un mauvais câblage, une utilisation non conforme aux spécifications, un entretien ou une réparation incorrecte, ou toute modification non autorisée. FLIR Systems, Inc. déclinera spécifiquement toute garantie ou qualité marchande ou aptitude à l'emploi prévu, et ne sera en aucun cas tenu responsable pour tout dommage conséquent, direct, indirect ou accidentel. La responsabilité totale de FLIR est limitée à la réparation ou au remplacement du produit. La garantie définie ci-dessus est inclusive et aucune autre garantie, écrite ou orale, n'est exprimée ou implicite.

Calibrage, réparation et services après-vente

FLIR Systems, Inc. offre des services de calibrage et de réparation pour les produits Extech Instruments que nous commercialisons. Nous fournissons également une certification NIST pour la plupart des produits. Contactez notre service client pour toute information sur les services de calibrage disponibles pour ce produit. Un calibrage doit être effectué chaque année pour vérifier les performances et la précision du mètre. Nous offrons également une assistance technique et un service à la clientèle. Veuillez vous reporter aux coordonnées fournies ci-dessous.

Lignes d'assistance: États-Unis (877) 439-8324; international: +1 (603) 324-7800

Service d'assistance technique : Option 3 ; E-mail : support@extech.com

Réparations et retours : Option 4 ; E-mail : repair@extech.com

Les spécifications produit sont sujettes à modifications sans préavis.

Pour les toutes dernières informations, veuillez visiter notre site Web.

www.extech.com

FLIR Commercial Systems, Inc., 9 Townsend West, Nashua, NH 03063 USA

Certifié ISO 9001

Copyright © 2014 FLIR Systems, Inc.

Tous droits réservés, y compris la reproduction partielle ou totale sous quelque forme que ce soit.

www.extech.com

Garantía

FLIR Systems, Inc., garantiza este dispositivo marca Extech Instruments para estar libre de defectos en partes o mano de obra durante un año a partir de la fecha de embarque (se aplica una garantía limitada de seis meses para cables y sensores). Si fuera necesario regresar el instrumento para servicio durante o después del periodo de garantía, llame al Departamento de Servicio a Clientes para obtener autorización. Visite www.extech.com para información de contacto. Se debe expedir un número de Autorización de Devolución (AD) antes de regresar cualquier producto. El remitente es responsable de los gastos de embarque, flete, seguro y empaque apropiado para prevenir daños en tránsito. Esta garantía no se aplica a defectos resultantes de las acciones del usuario como el mal uso, alambrado equivocado, operación fuera de las especificaciones, mantenimiento o reparación inadecuada o modificación no autorizada. FLIR Systems, Inc., rechaza específicamente cualesquier garantías implícitas o factibilidad de comercialización o idoneidad para cualquier propósito determinado y no será responsable por cualesquier daños directos, indirectos, incidentales o consecuentes. La responsabilidad total de FLIR está limitada a la reparación o reemplazo del producto. La garantía precedente es inclusiva y no hay otra garantía ya sea escrita u oral, expresa o implícita.

Servicios de calibración, reparación y atención a clientes

FLIR Systems, Inc., ofrece servicios de reparación y calibración para los productos que vendemos de Extech Instruments. Además ofrecemos certificación NIST para la mayoría de los productos. Llame al Departamento de Servicio al Cliente para solicitar información de calibración para este producto. Para verificar el funcionamiento y precisión se debe realizar la calibración anual. Además se provee Soporte Técnico y servicios generales al cliente, consulte la información de contacto en seguida.

Líneas de soporte: EE.UU. (877) 439-8324; Internacional: +1 (603) 324-7800

Soporte Técnico Opción 3; correo electrónico: support@extech.com

Reparación / Devoluciones: Opción 4; correo electrónico: repair@extech.com

Las especificaciones del producto están sujetas a cambios sin aviso

Por favor visite nuestra página en Internet para la información más actualizada

www.extech.com

FLIR Commercial Systems, Inc., 9 Townsend West, Nashua, NH 03063 USA

Certificado ISO 9001

Copyright © 2014 FLIR Systems, Inc.

Reservados todos los derechos, incluyendo el derecho de reproducción total o parcial en cualquier medio

www.extech.com